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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,474	02/04/2004	Jin-Soo Park	678-0558 CON	2838
	7590 04/24/200 L LAW FIRM, P.C.	EXAMINER		
290 Broadhollo	,	SAFAIPOUR, BOBBAK		
Suite 210E Melville, NY 1	1747		ART UNIT	PAPER NUMBER
·			2618	
			MAIL DATE	DELIVERY MODE
			04/24/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Applic	ation No.	Applicant(s)		
Office Action Summary		10/771	,474	PARK ET AL.		
		Exami	ner	Art Unit		
		BOBBA	K SAFAIPOUR	2618		
- Period fo	- The MAILING DATE of this commun r Reply	nication appears on	the cover sheet with	the correspondence a	ddress	
WHIC - Extens after S - If NO - Failure Any re	DRTENED STATUTORY PERIOD F HEVER IS LONGER, FROM THE IN sions of time may be available under the provision: SIX (6) MONTHS from the mailing date of this comi- period for reply is specified above, the maximum s e to reply within the set or extended period for reply sply received by the Office later than three months d patent term adjustment. See 37 CFR 1.704(b).	MAILING DATE OF s of 37 CFR 1.136(a). In no munication. tatutory period will apply an y will, by statute, cause the	THIS COMMUNICA' event, however, may a reply d will expire SIX (6) MONTHS application to become ABANI	TION. be timely filed from the mailing date of this DONED (35 U.S.C. § 133).	·	
Status						
2a)⊠ 3)□	Responsive to communication(s) file This action is <b>FINAL</b> . Since this application is in condition closed in accordance with the pract	2b)∏ This action is for allowance exce	s non-final. opt for formal matters		ne merits is	
Dispositio	on of Claims					
5)□ 6)⊠ 7)□ 8)□	Claim(s) <u>1-22</u> is/are pending in the la) Of the above claim(s) is/a Claim(s) is/a Claim(s) is/are allowed. Claim(s) <u>1-22</u> is/are rejected. Claim(s) is/are objected to. Claim(s) are subject to restri	are withdrawn from				
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10) 🔲 7	The specification is objected to by the drawing(s) filed on is/are Applicant may not request that any objected to detail the contract of the placement drawing sheet(s) including the oath or declaration is objected to	: a) ☐ accepted or ection to the drawing(s g the correction is req	s) be held in abeyance. uired if the drawing(s)	See 37 CFR 1.85(a). is objected to. See 37 C	, ,	
Priority u	nder 35 U.S.C. § 119					
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No.</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>						
2) Notice 3) Inform	e of References Cited (PTO-892) of Draftsperson's Patent Drawing Review (lation Disclosure Statement(s) (PTO/SB/08) No(s)/Mail Date	PTO-948)	Paper No(s)/M	mary (PTO-413) ail Date mal Patent Application		

## **DETAILED ACTION**

This Action is in response to Applicant's response filed on 01/16/2009. Claims 1-22 are still pending in the present application. This action is made FINAL.

## Response to Arguments

Applicant argues that Li fails to disclose that each of a plurality of multiplexed bits are allocated to a one of sixteen slots of the reverse frame, and that each slot comprises a single bit, as recited in claim 1.

The Examiner respectfully disagrees. Li clearly discloses a fundamental power control sub-channel and a supplemental power control sub-channel that are time multiplexed on a reverse pilot channel (abstract; read as each slot of the reverse frame contains a single multiplexed bit). Taking a closer look at figure 3, Li discloses in the reverse pilot channel, the pilot and power control bits are transmitted over 20 ms time intervals or frames. Each frame of the reverse pilot channel comprises sixteen 1.25 ms time intervals (read as one of sixteen slots of the reverse frame) referred to herein as power control sub-frames over which a power control group is transmitted, wherein each pilot control sub-frame comprises four sub-channels and each power control group comprises four bits representing a pilot and power control. In each sub-channel, a single bit may be transmitted (read as each slot comprises a single bit), wherein each bit comprises 384XN symbols and N represents a chip rate. (figure 3; col. 3, lines 12-26)

The recited claim language states "...one of sixteen *slots* of a reverse frame". In figure 3 of Li, frame 1 discloses <u>16 sub-frames</u> (read as one of sixteen *slots*). If the Applicant wants to differentiate between a slot of a reverse frame, as indicated in the present application, and a

claims.

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Furthermore, Applicant argues Lin fails to disclose first and second bits indicating reception states of first and second information, respectively, received from a base station on first and second traffic channels, respectively, as recited in claim 1.

The Examiner respectfully disagrees. Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Lin further discloses that the EIB (read as second information) bit reported by mobile unit 102 to determine if the forward traffic channel message should be resent. The forward traffic channel message should be resent if mobile unit 102 indicates that an erasure has occurred, thereby indicating that the frame was not accurately received. In this manner, the EIB bit transmitted by mobile unit 102 acts like an Ack message for the forward traffic frame transmitted by base station 104. (figure 2; col. 3, lines 20-27)

The user frame is transmitted on a periodic basis, preferably every 20 milliseconds. The mobile unit then transmits an erasure indicator bit to indicate whether the user frame was received. The transcoder then collects (209) reverse link feedback by receiving the erasure indicator bit at the base station. The transcoder then performs (211) a selector function. The selector function selects the highest quality user frame from all available handoff links sent by the mobile unit. The transcoder then determines (213) whether there has been a received frame

erasure or an erasure EIB. A received frame erasure (read as first information) indicates that the user frame containing an EIB was not accurately received by the base station. An erasure EIB indicates that the mobile unit did not accurately receive the user frame sent by the base station. If the reverse link feedback was not a received frame erasure or an erasure EIB, the transcoder determines (215) whether the EIB is from a message frame. If the EIB is from a message frame, the transcoder determines that the signaling message was accurately received and deletes (217) the stored message and returns to the beginning of processing. (figure 2; col. 3, line 53 to col. 4, line 5)

Finally, Applicant argues that neither Li nor Lin disclose a multiplexer or demultiplexers.

The Examiner respectfully disagrees. As indicated in the previous Office Action dated 10/17/2008, the Examiner has relied on Kwon to disclose multiplexers and demultiplexers.

Figure 5 of Kwon clearly shows a MUX 126 and furthermore, figure 6 clearly shows another MUX 207. Figure 2 of Kwon clearly shows a DEMUX 12.

## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.

- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 6,590,873 B1; hereinafter Li) in view of Lin et al. (US 6,249,894; hereinafter Lin).

Consider **claim 1**, Li discloses a method of reporting reception states of a reverse link comprising a plurality of channels, wherein the pilot and power control bits are transmitted over 20 ms time intervals (col. 3, lines 12-25) from a base station in a mobile station, comprising the steps of: allocating each of a plurality of multiplexed bits indicating a reception states to one of sixteen slots of a reverse frame via a multiplexer, wherein each slot comprises a single bit (col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms power control sub-frames over which a power control group is transmitted, wherein each pilot control group

comprises four bits representing a pilot and power control); and transmitting the reverse frame (col. 3, lines 11-65).

Li fails to specifically disclose reception states of first information received on a first traffic channel and second information received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis.

In related Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Consider **claim 6**, Li discloses a method of controlling transmission power of traffic channels in a base station which transmits pilot and power control bits are transmitted in a reverse link over 20 ms time intervals (col. 3, lines 12-25) to a mobile station, comprising the steps of: receiving a reverse frame comprising a plurality of multiplexed reception state indicating bits, wherein the reverse frame comprises sixteen slots and each slot comprises a single bit (col. 3, lines 11-65); separating the reception state indicating bits from the reverse frame (col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms

power control sub-frames over which a power control group is transmitted, wherein each pilot control group comprises four bits representing a pilot and power control), and performing a power control on traffic channels (col. 3, lines 11-65), wherein the reception state are reception result indicator bits for power control on a frame basis (col. 3, lines 11-65).

Li fails to specifically disclose reception states of first information received on a first traffic channel and second information received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis.

In related Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Consider **claim 2**, and **as applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention wherein the plurality of multiplexed reception state indicating bits of the first and second information are alternatively allocated. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 3**, and **as applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 4**, and **as applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention wherein each of the plurality of the plurality of multiplexed reception state indicating bits of the first and second information are comprise at least one of a Quality Indicator Bit (QIB) and an Erasure Indicator Bit (EIB). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 5**, and **as applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention except for wherein the plurality of multiplexed reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider **claim 7**, and **as applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention wherein the plurality of multiplexed reception state indicating bits of the first and second information are alternatively allocated. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

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Consider **claim 8**, and **as applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

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Consider **claim 9**, and **as applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention wherein each of the plurality of the plurality of multiplexed reception state indicating bits of the first and second information are comprise at least one of a Quality Indicator Bit (QIB) and an Erasure Indicator Bit (EIB). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 10**, and **as applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention except for wherein the plurality of multiplexed reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 6,590,873 B1; hereinafter Li) in view of Lin et al. (US 6,249,894; hereinafter Lin) and in further view of Kwon et al. (US 6,151,328; hereinafter Kwon)

Consider **claim 11**, Li discloses a mobile station for receiving information from a base station (figure 1; col. 2, line 66 to col. 3 line 11; forward link) and reporting reception results information to the base station (figure 1; col. 2, line 66 to col. 3 line 11), comprising: indicating bits of the information (col. 3, lines 11-65); allocating the reception state indicating bits in slots of a reverse frame, wherein the reverse frame comprises sixteen slots and each slot comprises a single reception state indicating bit (col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms power control sub-frames over which a power control group is transmitted, wherein each pilot control group comprises four bits representing a pilot and power control).

Li fails to specifically disclose a first MUX for multiplexing reception state indicating bits of the first and the second information; and a second MUX for sequentially allocating the multiplexed the reception state indicating bits of the first and the second information.

In related art, Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Furthermore, in related art, Kwon discloses first and second multiplexers. (col. 7, lines 13 to 47; col. 12, lines 13-19, 57-65; and col. 13, lines 13-22)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Kwon into the teachings of Li and Lin to control power in a CDMA system which is capable of performing a power control operating in consideration of different environments.

Consider **claim 17**, Li discloses a base station for transmitting to a mobile station and receiving the reception results of the information from the mobile station (figure 1; col. 3, lines 11-65; reverse link), comprising: receiving a reverse frame comprising sixteen slots including a plurality of slots, wherein each slot comprises a single reception state indicating bit and for separating reception state indicating bits from the reverse frame (figure 1; col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms power control sub-frames over which a power control group is transmitted, wherein each pilot control group comprises four bits representing a pilot and power control).

Li fails to specifically disclose a first demultiplexer (DEMUX) for receiving a reverse frame including a plurality of slots and for separating reception state indicating bits of the first and the second information multiplexed by the mobile station from the reverse frame; and a second DEMUX for demultiplexing the multiplexed reception state indicating bits into the reception state indicating bits of the first information and the reception state indicating bits of the second information.

In related art, Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second

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information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Furthermore, in related art, Kwon discloses first and second demultiplexers. (col. 1, lines 41-51; col. 4, lines 7-23; col. 8, lines 45-52; and col. 9, lines 13-17 and 45-53)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Kwon into the teachings of Li and Lin to control power in a CDMA system which is capable of performing a power control operating in consideration of different environments.

Consider **claim 12**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the first MUX allocates a first predetermined number of successive reception state indicating bits of the first information, each bit being allocated to a successive leading slot, and a second predetermined number of successive reception state indicating bits of the second information, each bit being allocated to a successive trailing slot, the trailing slots following the leading slots for the first information. (Kwon: col. 7, lines 13 to 47; col. 12, lines 13-19, 57-65; and col. 13, lines 13-22; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 13**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first and second information are reception result indicator bits for power control on a frame basis. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 14**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 15**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein each of the plurality of the plurality of multiplexed reception state indicating bits of the first and second information are comprise at least one of a Quality Indicator Bit (QIB) and an Erasure Indicator Bit (EIB). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 16**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider **claim 18**, and **as applied to claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the multiplexed reception state indicating bits of the first information are arranged in consecutive leading slots of the reverse frame and the multiplexed reception state indicating bits of the second information are arranged in trailing consecutive slots following the leading slots. (Kwon: col. 7, lines 13 to 47; col. 12, lines 13-19, 57-65; and col. 13, lines 13-22; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 19**, and **as applied to claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 20**, and **as applied to claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 21**, and **as applied to claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein each of the plurality of the plurality of multiplexed reception state indicating bits of the first and second information are comprise at least one of a Quality Indicator Bit (QIB) and an Erasure Indicator Bit (EIB). (Lin: figure 2; col. 3, line 20 to

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col. 4, line 27)

Consider **claim 22**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

## Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be faxed to (571) 273-8300 or mailed to:

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipour whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Bobbak Safaipour/ Examiner, Art Unit 2618

April 23, 2009

/Matthew D. Anderson/

Supervisory Patent Examiner, Art Unit 2618